FALL WATER SUPPLY SUMMARY FOR NEVADA

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

NEVADA DEPARTMENT of CONSERVATION
and NATURAL RESOURCES
DIVISION of WATER RESOURCES

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
OCT. 1, 1974

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover Photo: Snow Surveyors near Ship Creek, Alaska snow course.

S. C. PHOTO A-2272-11

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and tor British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND, OREG. 1973

WATER SUPPLY OUTLOOK FOR NEVADA

NEVADA'S 1974 IRRIGATION WATER SUPPLY WAS VERY GOOD. AS FORECAST LAST SPRING, MOUNTAIN SNOWPACK PRODUCED ABOVE AVERAGE STREAMFLOW THROUGHOUT MOST OF THE STATE.

EAST SLOPE SIERRA STREAMS PRODUCED FROM 111 PERCENT ON THE TRUCKEE TO MORE THAN 125 PERCENT OF AVERAGE ON THE CARSON THIS YEAR. SIMILARLY, THE WALKER RIVER FLOWED SLIGHTLY LESS THAN 120 PERCENT OF AVERAGE. STREAMFLOW IN THE HUMBOLDT BASIN VARIED FROM 18 PERCENT BELOW AVERAGE ON THE MAINSTEM TO MORE THAN 130 PERCENT OF NORMAL ON SOME TRIBUTARIES. THE OWYHEE DRAINAGE PRODUCED 30 PERCENT GREATER THAN NORMAL STREAMFLOW THIS PAST SUMMER.

RESERVOIR STORAGE IS WELL ABOVE AVERAGE, REFLECTING THE GOOD STREAMFLOW SEASON. IN SOME CASES, THIS STORED WATER IS STILL BEING USED FOR LATE IRRIGATIONS.

The excellent streamflow was particularly beneficial this past season as summer rainfall was well below average for most of the state. Summer temperatures were also above normal, requiring additional irrigation water to offset crop demands. This summer produced a few new temperature records in the southern portion of the state.

Nevada's principal reservoirs, exclusive of Lake Mead and Lake Mohave, currently contain 66 percent of capacity, which is 133 percent of the October 1, 1958-72 average. This stored water goes a long way toward producing a potentially favorable water prospect for the coming 1975 irrigation season.

The past spring and summer produced very little rain throughout most of Nevada's watersheds. As an example, only 1/2 inch of precipitation was recorded at Marlette Lake gage from May 1 to October 1 this year This situation has left the mountain soils very dry. These soils will require more than average amounts of moisture from this winter's snowpack to wet them to field capacity.

The first 1975 Water Supply Outlook report will be issued on January 3, 1975, to be followed by subsequent monthly reports through May. These reports will contain the latest snow survey, reservoir storage, and soil moisture data, along with April - July 1975 streamflow forecasts.

APRIL - JULY 1974

NEVADA STREAMFLOW FORECASTS
AND
OBSERVED STREAMFLOW

The following table contains April-July forecasts made during the past winter. Observed streamflow quantities are provisional and were furnished by the U.S. Geological Survey.

FORECAST STREAMS	April-July Streamflow, Thousand acre-feet Forecast				Observed 1974	Average 1958-72	Observed 1974 as % of 15 yr. avg.
	Feb. 1 1974	Mar. 1 1974	Apr. 1 1974	May 1 1974			
Little Truckee above Boca, CA[1]		94	115	115	95	89	106
Truckee at Farad, CA[1]		285	320	320	297	267	111
Lake Tahoe[3]		1.48	1.70	1.70	1.63	1.46	111
E. Carson nr Gardnerville, NV		183	200	200	228	182	125
E. Carson nr Gardnerville, NV (Date of 200 c.f.s. flow)		7/21	7/24	7/27	8/8	7/20	-
W. Carson at Woodfords, CA		60	60	60	65	52	125
Carson nr Carson City, NV		185	193	193	223	178	125
Carson nr Ft. Churchill, NV		165	183	183	202	159	127
E. Walker nr Bridgeport, CA[2]		76	70	70	80	68	117
W. Walker below Little Walker nr Coleville, CA	180	155	160	160	173	145	119
Lamoille Creek nr Lamoille, NV		29	30	30	24	28	85
South Fork Humboldt nr Elko, NV		90	83	83	NA	66	NA
Marys River above Hot Springs, NV		35	36	36	47	34	138
N. Fork Humboldt at Devils Gate, NV		33	32	32	38	32	118
Humboldt at Palisade, NV	244	210	225	225	160	193	82
Humboldt at Comus, NV		160	169	169	117	149	78
Martin Creek nr Paradise, NV		18	14	14	16	16	100
Owyhee nr Gold Creek, NV[1]	23	25	25	25	35	18	194
Owyhee nr Owyhee, NV[1]	79	84	80	80	88	68	129

1 Corrected for storage above station.
2 April-August flow, corrected for storage.
3 Maximum rise in feet from April 1, assuming gates closed.

NA Not Available

NEVADA STATUS OF RESERVOIR STORAGE

October 1, 1974

Basin and Stream	Reservoir	Usable Capacity (1,000 AF)	Usable Storage - 1,000 acre-feet 1974	1973	1972	15-Year Average 1958-72
Owyhee	Wild Horse	72	50	49	54	18
Lower Humboldt	Rye Patch	157	106	116	152	89
Colorado	Mohave	1,810	1,384	1,412	1,404	1,402
Colorado	Mead	27,217	19,326	20,176	17,451	17,346
Tahoe	Tahoe	732	580	500	483	445
Truckee	Boca	41	39	4	28	14
Truckee	Prosser	30*	15	11	14	15**
Truckee	Stampede	220	193	195	116	Storage began 8/1/69
Carson	Lahontan	291	142	127	134	120
West Walker	Topaz	59	24	12	10	18
East Walker	Bridgeport	42	20	12	6	15

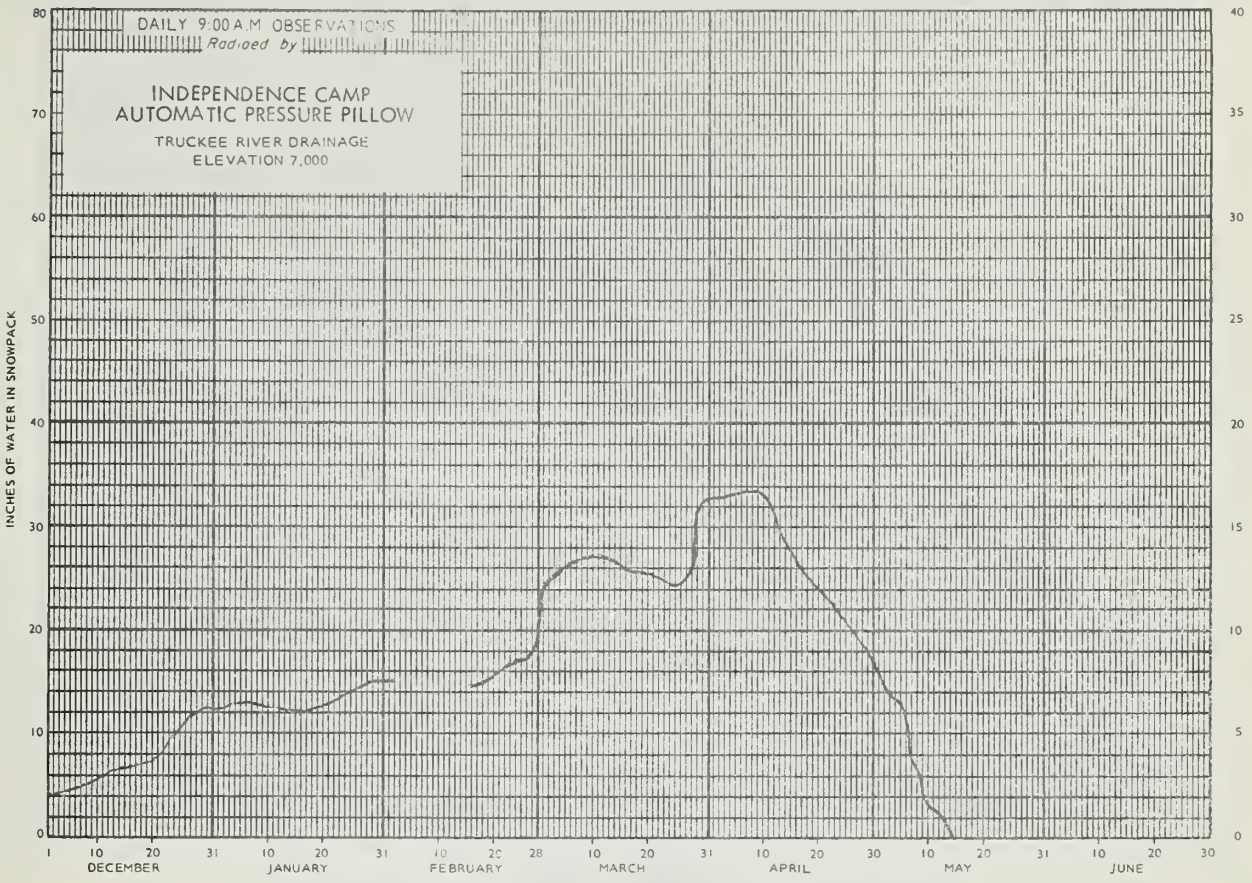
* Flood control use allocation of 20,000 acre-feet between November 1 and April 10.
** Storage began 1/30/63

SOIL MOISTURE

October 1, 1974

Station	Elevation	Profile Depth (Inches)	Capacity	Date	Soil Moisture (inches) This Year	Last Year	2 Years Ago
East Slope Sierra							
Independence Camp	7000	34	6.10	9/23	1.7	1.8	2.2
Marlette Lake	8000	50	3.70	9/27	1.2	1.1	1.1
Sonora Pass	8800	48	8.30	9/25	4.9	1.3	2.8
Virginia Lake	9200	40	5.00	9/25	2.9	1.7	1.9
Humboldt Basin							
Rodeo Flat	6800	42	11.00	9/4	4.8	4.9	4.9
Owyhee Basin							
Big Bend	6700	48	16.70	9/4	12.5	12.7	12.3
Taylor Canyon	6200	48	15.00	9/4	8.6	7.2	7.7
Jack Creek, Lower	6800	48	8.70	9/4	5.3	4.2	4.1

U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION



1973 - 1974

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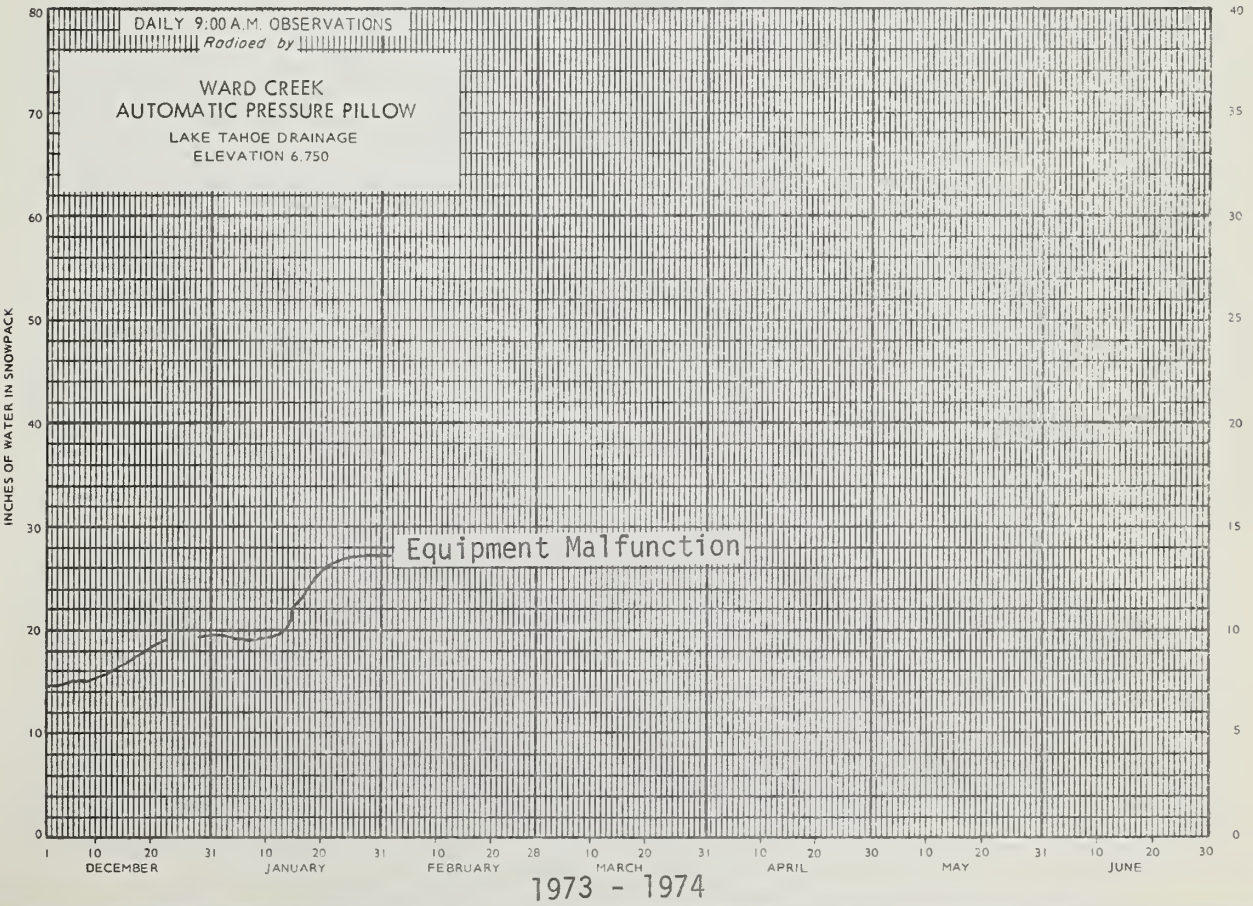

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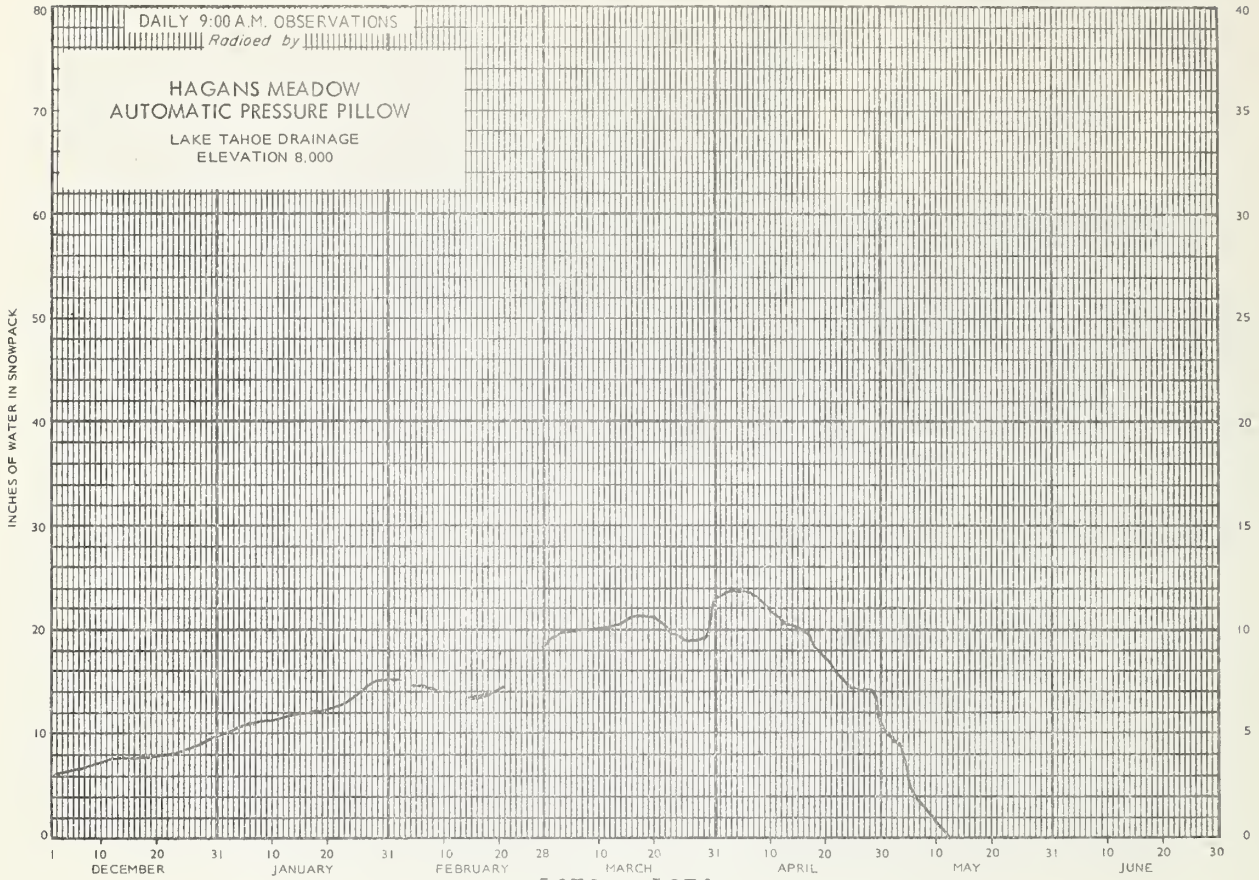

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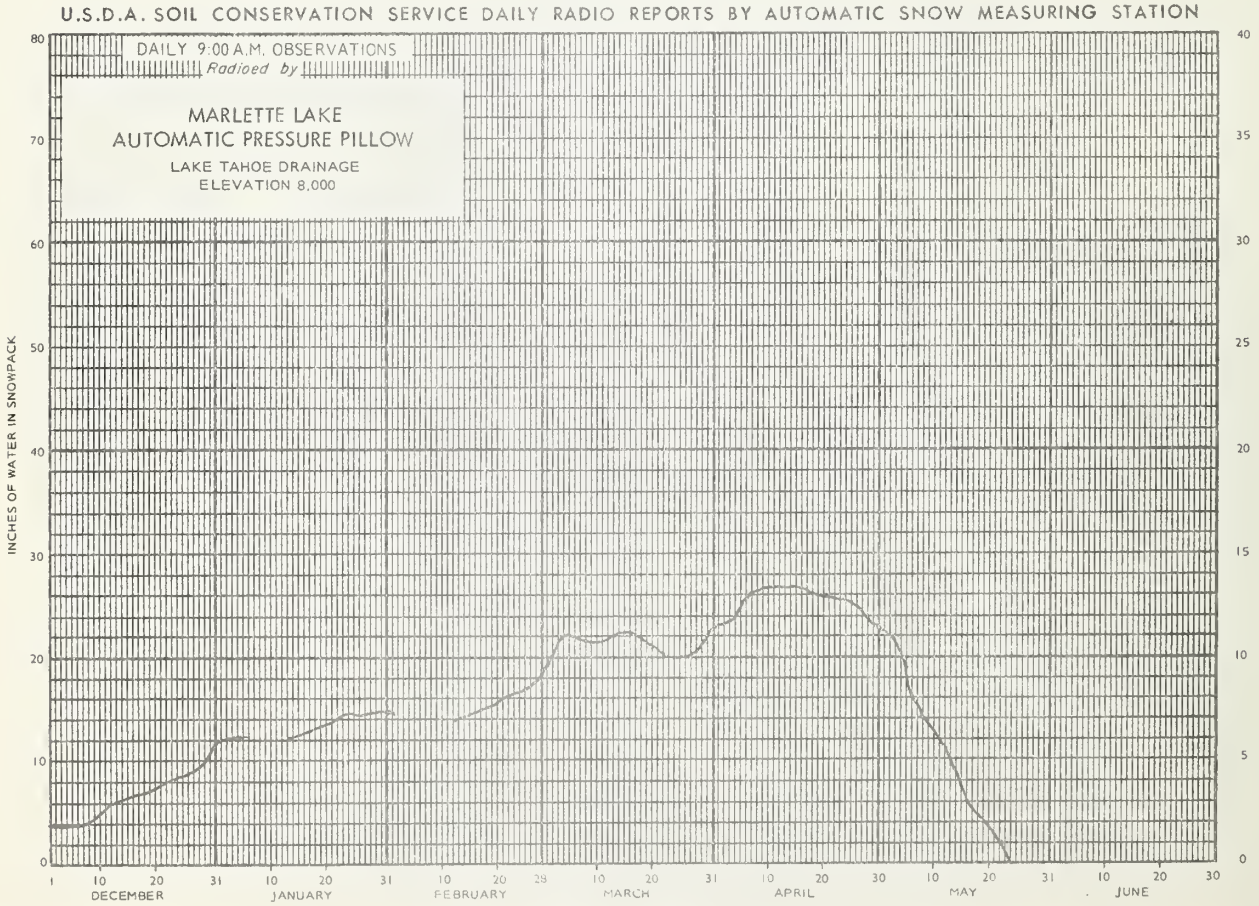

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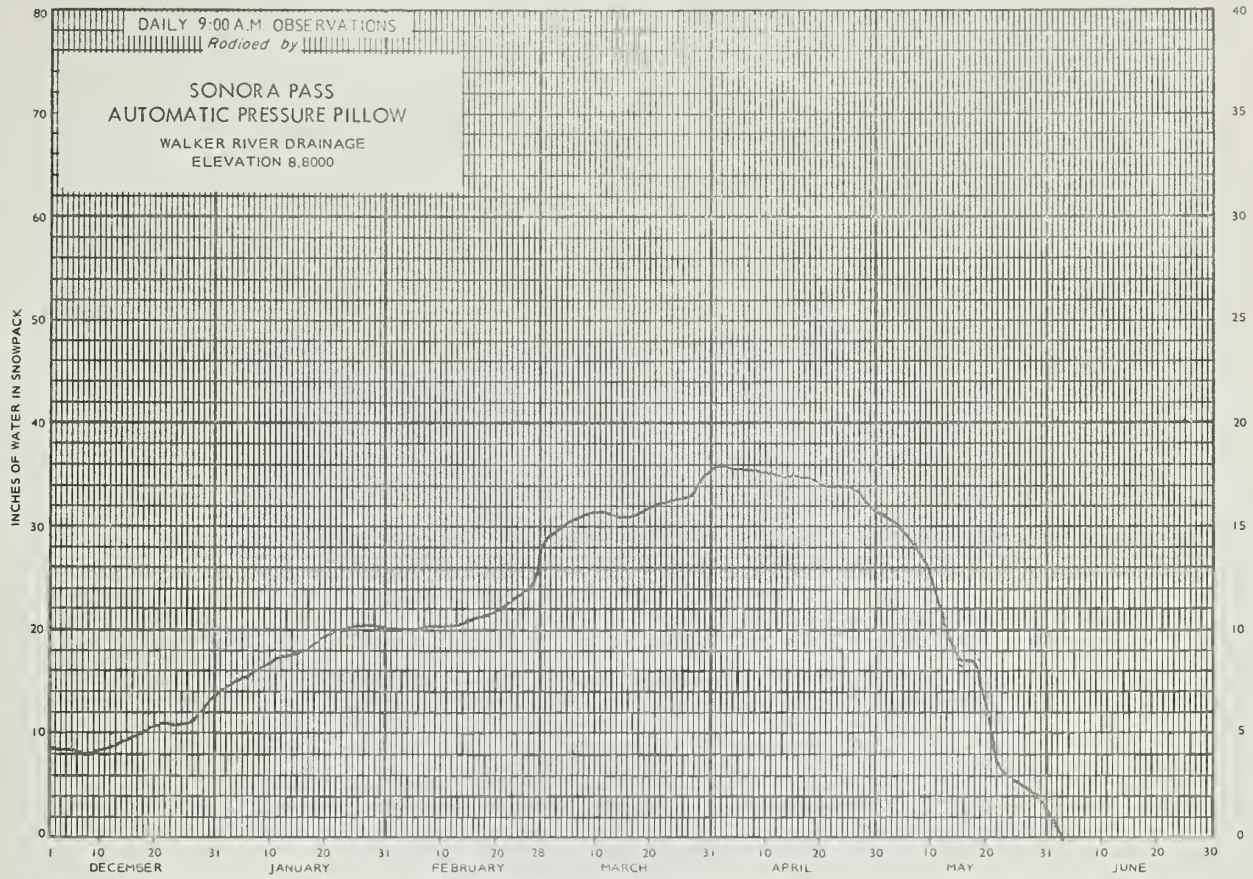

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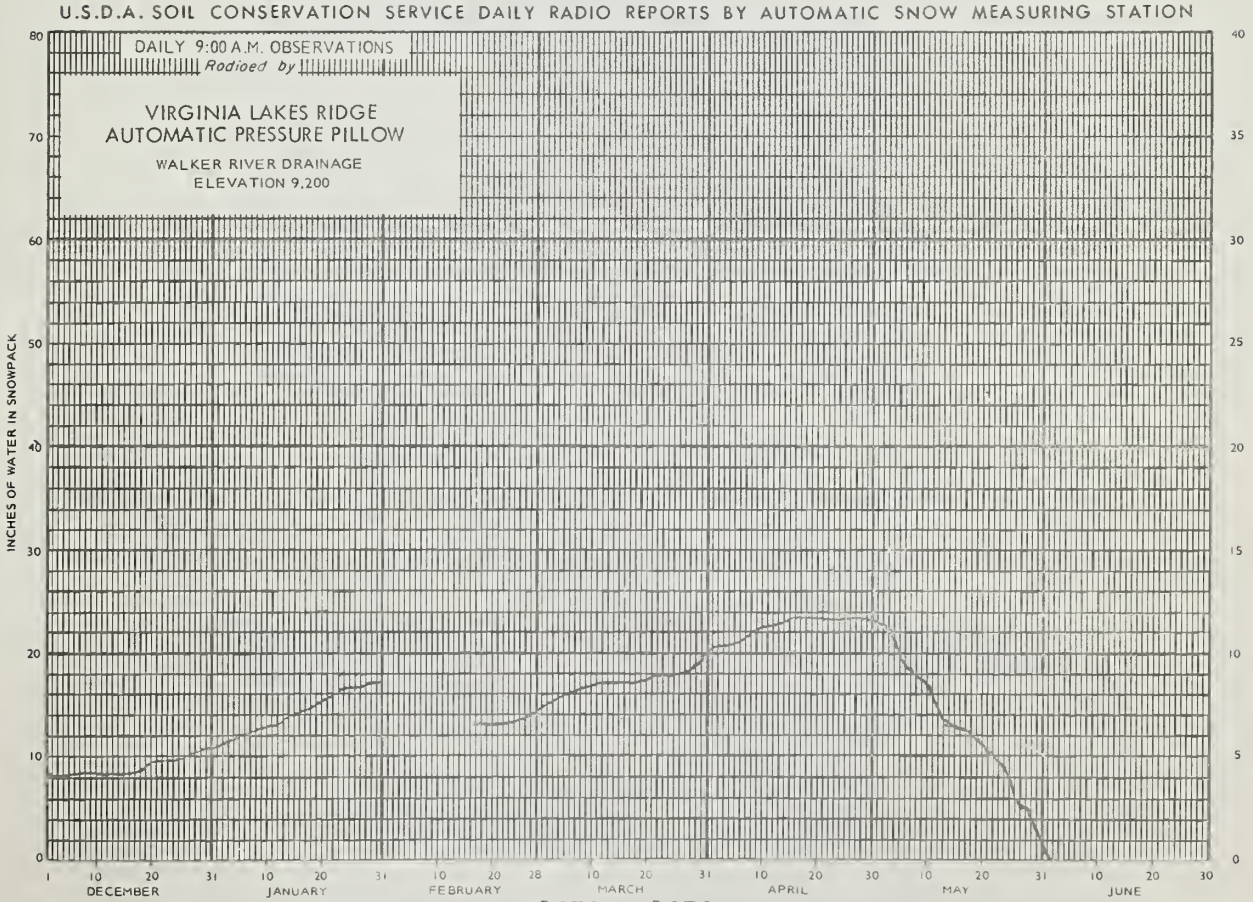

1973 - 1974

Agencies Cooperating in Collecting Data Contained in this Bulletin

FEDERAL
- Agricultural Research Service
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- Geological Survey
- Navy
- Soil Conservation Service
- U. S. District Court - Federal Water Master
- NOAA, National Weather Service

STATE
- California Cooperative Snow Surveys
- California Department of Parks and Recreation
- California Department of Water Resources
- Colorado River Commission of Nevada
- Idaho Cooperative Snow Surveys
- Nevada Association of Conservation Districts
- Nevada Department of Conservation & Natural Resources
  - Division of Water Resources
  - Nevada State Forester
- Oregon Cooperative Snow Surveys
- Utah Cooperative Snow Surveys
- White Mountain Research Station, Univ. of California

PRIVATE
- Amalgamated Sugar Company
- Kennecott Copper Corporation
- Nevada Irrigation District
- Owyhee Project North Board of Control
- Owyhee Project South Board of Control
- Pacific Gas and Electric Company
- Pershing County Water Conservation District
- Sierra Pacific Power Company
- Truckee-Carson Irrigation District
- Walker River Irrigation District
- Washoe County Water Conservancy District

Other organizations and individuals furnish valuable information for the snow survey reports. Their Cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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"The Conservation of Water begins with the Snow Survey"